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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,624	10/30/2000	Michael Goldstein	12808.7USI1	7054
23552	7590	08/27/2002		
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER	
		AN, SHAWN S		
ART UNIT	PAPER NUMBER			
2613			DATE MAILED: 08/27/2002	

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. 09/699,624	Applicant(s) Michael Goldstein et al.
Examiner Shawn An	Art Unit 2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is FINAL.      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4)  Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-21 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

- a)  All b)  Some\* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

- a)  The translation of the foreign language provisional application has been received.

- 15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1)  Notice of References Cited (PTO-892)      4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)      5)  Notice of Informal Patent Application (PTO-152)
- 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). 8, and      6)  Other: \_\_\_\_\_

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## DETAILED ACTION

### *Response to Preliminary Amendment*

1. As per Applicant's instructions in Paper 6 as filed on 3/12/01, claim 8 has been amended.

### *Specification*

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Drawings*

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:  
Figs 25 and 26, A-C, as disclosed in page 33, last line, is not included in the drawing. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-19 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Street (6,075,555) in view of Watannabe (5,812,187).

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**Regarding claims 1, 8, 11, 15, and 20,** Street discloses a stereoscopic device comprising:  
at least two apertures (Fig. 3, 41) including a light valve being operative to open at a  
different predetermined timing (col. 6, lines 34-50);  
a multiwavelength light sensor array (32);  
an illuminating unit (Fig. 1, 1);  
wherein the light sensor array detects a plurality of images corresponding to a  
predetermined combination of open state of a selected one of the light valves and a selected one  
of at least two alternating beams of light (col. 6, lines 26-64).

Street does not specifically disclose a controllable multi wavelength illuminating unit  
producing at least two alternating beam of light as being in a different range of wavelengths.

However, Watannabe teaches an endoscope (Fig. 1) including a conventional controllable  
multi wavelength illuminating unit producing at least two alternating beam of light (5) as being in  
a different range of wavelengths.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art  
employing a stereoscopic device as taught by Street to incorporate the Watannabe's controllable  
multi wavelength illuminating unit in place of the Street's illuminating unit being controlled by the  
Street's control circuit (43) so as to produce at least two alternating beam of light (R, G, B)  
having a different range of wavelengths for generating a more accurate color video signal, thus  
improving an image quality.

**Regarding claims 2 and 3,** it is considered quite obvious to include two group of sensor  
or a plurality of sensors so that each group of sensor can detect light in a different wavelength  
such as blue or red or green.

**Regarding claims 4-5 and 7,** incorporating the combination of Street and Watannabe's  
references, it is considered a simple design choice for the Watannabe's illuminating unit (5) to  
surround the Street's aperture (41) or to direct light aside from the aperture in order to efficiently  
illuminate different range of wavelengths to a maximum level.

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**Regarding claim 6,** Watannabe teaches a multiwavelength light source (6 or 7); a light dispersing unit inherently shown (Fig. 1), but not indicated as an element; and light guiding means (3) connected between the light source and the light dispersing unit for guiding light.

**Regarding claim 9,** Street discloses a controller (43) connected to the light valves, the light sensor array, and would have been obvious to Watannabe's illumination unit, for timing the operation of the light valves, the sensor array, and also would have been obvious to the Watannabe's illumination unit.

**Regarding claim 10,** Street discloses a storage unit (50 or 51) for storing captured data.

**Regarding claim 12,** Street discloses a stereoscopic display unit (abs.) for producing the images.

**Regarding claims 13 and 14,** Street discloses wavelengths consisting of visible red, green blue colors light (7). Furthermore, it is considered quite obvious to add more conventional colors such as cyan, yellow, magenta, infra-red, ultra-violet, and visible light.

**Regarding claim 16,** since Street discloses RGB sensor array, it is considered quite obvious to include/substitute CYMG sensor array so as to detect different wavelengths.

**Regarding claim 17,** Watannabe teaches an image processing (20a-21a) connected to the CCD sensor and the illuminating unit. Further, it is inherently well known for a stereoscopic device, such as a stereoscopic endoscope, to include an image processing for processing images for display on display monitor. Therefore, incorporating the combination of Street and Watannabe's references, it is considered quite obvious to utilize an image processor such as Watannabe's image processor, to be connected to the Street's light sensor array, and the Watannabe's illuminating unit.

**Regarding claim 21,** it is inherently well known for a conventional stereoscopic device to reconstruct a stereoscopic image from a sensor or a camera, which comprises a plurality of frames as outputs, for display on the stereoscopic monitor.

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6. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Street and Watannabe as applied to claim 1 above, and further in view of Yamashita et al (4,933,760).

**Regarding claim 18,** the combination of Street and Watannabe fails to disclose a motion detector for detecting the movement.

However, Yamashita teaches a conventional motion detector for detecting the movement (Fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a stereoscopic device as taught by Street to incorporate the motion detector as taught by Yamashita for detecting movement of the light sensor array and the apertures.

**Regarding claim 19,** Watannabe teaches an image processing (20a-21a) connected to the CCD and the illuminating unit. Further, it is inherently well known for a stereoscopic device, such as a stereoscopic endoscope, to include an image processing for processing images for display on display monitor. Therefore, incorporating the combination of Street, Yamashita et al, and Watannabe's references, it is considered quite obvious to utilize an image processor such as Watannabe's image processor, to be connected to the Street's light sensor array, Watannabe's illuminating unit, and the Yamashita's motion detector for better synchronous control of those devices.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

- A) Goldstein et al (6,396,873), Optical device.
- B) Lia (5,222,477), Endoscope or borescope stereo viewing system.
- C) Greening et al (5,828,487), Stereoscopic viewing system using a two dimensional lens system.

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D) Shipp (5,471,237), Single lens stereoscopic video camera.

8. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday-Friday (Monday off).

SHAWN S. AN  
PATENT EXAMINER



SSA

August 22, 2002